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Surgical anatomy of gastrocolic trunk in relation to the head of pancreas: A cadaveric study

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Introduction: Gastrocolic trunk (GCT) is vulnerable to unexpected bleeding during the various surgical procedures like pancreaticoduodenectomy, superior and inferior head resection, etc. and is the leading cause of post-operative morbidity. Detailed knowledge of venous anatomy including anatomic variants of GCT in relation to head of pancreas becomes essential to minimize complication and post-operative morbidity.

Material and method: Blue colored cellulose acetate butyrate was injected into portal vein of 20 adult pancreas enbloc specimens. Gasterocolic trunk was identified and its tributaries and termination was traced. Distance of GCT from different parts of head was noted.

Results: Two types of configurations of GCT were observed: bipodal configuration (contributing veins – right gasteroepiploic vein (RGEP) & anterior superior pancreaticoduodenal vein (ASPDV) was found in 15% of specimen, tripordal configuration (contributing veins – RGEV, ASPDV & superior right colic vein) was found in 85%. Orientation of GCT was horizontal in 40% of cases and obliquely downward with inclination to right in 60% of the cases. GCT joined right aspect of trunk of superior mesenteric vein (SMV) in 80% and anterior aspect of SMV in 20% cases. Gastrocolic trunk joined SMV 29.75 mm ± 2.57 inferior to its confluence with splenic vein. Average distance of beginning GCT from duodenopancreatico groove was 21.30 mm ± 8.48, from upper border of head of pancreas 11.65 mm ± 4.70 and from lower border of neck of the pancreas was & 22.46 mm ± 5.45.

Conclusion: Understanding the venous anatomy of the gastrocolic trunk prior to conducting partial procedures may help to decrease in post-operative morbidity rates.

Conflicts of interest

The authors have none to declare.

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Baker's cyst and its clinical significance

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Introduction: The Baker's cyst is a bursa seen between medial head gastrocnemius and semimembranosus, which usually communicates with the cavity of knee joint, mostly asymptomatic. They can occur due to any intra-articular pathology including bony inflammation, cartilaginous lesions, meniscal or ligament tear, etc. The symptomatic cases are mainly leading to pressure effects due to anatomical vulnerability of surrounding structures. Although, Baker's cyst is a chronic disorder and after treatment also requires follow up to prevent relapses, it causes difficulty in differential diagnosis while presenting in acute state.

Case report: During routine dissection classes, it was noted that a thick fascial ballooning existed on the back of popliteal fossa on postero-medial side present between the medial head of gastrocnemius and semimembranosus. The cystic swelling was in continuation with the capsule of knee joint.

Discussion: Baker's cyst remains asymptomatic having mild pressure effects on surrounding muscles, but their increase in size lead to neural or vascular symptoms or both. The neurovascular bundle present around the cyst includes the tibial nerve, sciatic nerve, common peroneal nerve, popliteal vein and popliteal artery. Compression of these structures might present as neuropathies, gastrocnemius muscle atrophy, intermittent ischemia or critical posterior compartment syndrome. Diagnosis often becomes crucial, which is achieved by Venous Duplex scanning and ultrasound imaging or MRI. Open surgical excision of the cyst by posteromedial approach is usually done. Arthroscopic valve closure along with excision of the cyst using posteromedial approach has also shown good result.

Conflicts of interest

The author has none to declare.

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Branching pattern of renal artery and its clinical significance: A cadaveric study

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Introduction: Anatomical variations in the vascular pattern of kidneys have been well documented in medical literature. Normally each kidney is supplied by a single renal artery. Multiple renal arteries are unilateral in approximately 30% of patients and bilateral in approximately 10%. Aim of the present study is to highlight multiple variations in renal vascular pattern in North Indian Population.

Material and method: Renal arterial pattern of a total of 51 kidneys (28 right and 23 left) were studied after careful dissection of the hilar region.

Results: 64.7% (33 kidneys) were supplied by a single renal artery. Variations were observed in 35.3% (18 kidneys). Out of which 27.5% (14) belonged to right and 7.85% (4) to left.

Conclusion: Awareness of variations of renal artery is necessary for surgical management during renal transplantation; repair of abdominal aorta aneurysm, urological procedures and for angiographic interventions. During renal transplant and kidney retrieval surgeries a failure in recognizing these anomalies may lead to severe hemorrhage and graft loss.

Conflicts of interest

The authors have none to declare.

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Correlation between hand digit ratio (2D:4D) and age at menarche

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Introduction: Prenatal steroid levels, estimated as the ratio of second to fourth digit length (2D:4D) have been related to reproductive success in women, but direct association between digit